Seminario Scuola Specializzazione Statistica Sanitaria e Biometria

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Dietary patterns and disease: the role of dietary indexes and multivariate statistics in shaping dietary recommendations

Abstract: Suboptimal diet has recently surpassed smoking as the leading risk factor for morbidity and mortality from noncommunicable diseases. Although diet may not inherently be as a strong risk factor for specific chronic diseases as others, limitations in data collection and analysis paradigms may contribute to a reduced ability to identify these effects accurately. Challenges include accurate and precise measurement of diet, appropriately modelling diet complexity, and residual confounding. In the lack of information on the relationship between exposure, confounders, and disease, current approaches in nutritional epidemiology include: 1) monitoring diet using traditional tools prone to well-known limitations; 2) tackling known interactions among foods/nutrients (i.e. nonadditivity) using standard approaches to the analysis of dietary patterns; 3) relating each of dietary patterns and confounders to disease risk in a linear way; 4) not modelling interactions between dietary patterns and confounders. Novel statistical and machine learning approaches may be used to improve on data collection and analysis paradigms. In this talk, we will specifically explore current and novel statistical approaches to the analysis of a posteriori dietary patterns. These patterns, derived by using multivariate statistics, more accurately reflect actual dietary behaviors in free-living populations. A key aspect of our discussion will be the reproducibility of a posteriori dietary patterns across different studies, populations, and countries. This reproducibility is crucial for providing robust epidemiological evidence to support the development of national and international dietary guidelines and for shaping effective public health messages.

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SAPIENZA
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MercoledÍ 11 Dicembre 2024, ore 16:00 Aula C1, Dipartimento Sanità Pubblica e Malattie Infettive, Istituto Sanarelli (CU015), piazzale Aldo Moro 5, ROMA